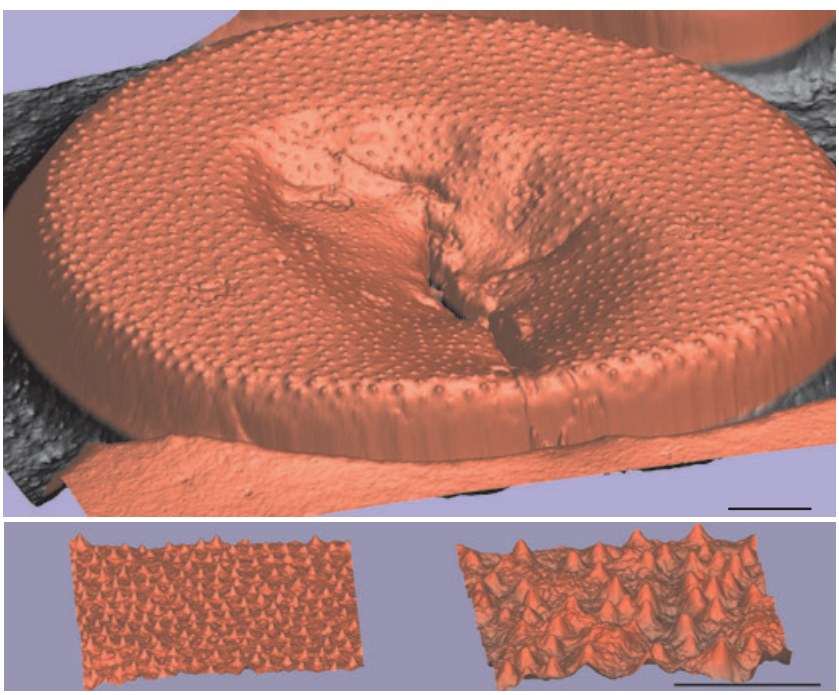
High density of 'spiky' excrescences covering the surface of an erythrocyte infected with *Plasmodium malariae*



This Atomic Force Microscope image shows the surface of a *Plasmodium malariae* trophozoite-infected red blood cell isolated from a Burmese patient suffering from quartan malaria (top). Of note, the *P. malariae*-infected cell (bottom left) is covered with dense 'spike-like' excrescences (mean height: 7·59 nm; mean diameter: 52·95 nm), which are morphologically distinct from the larger, more rounded 'knob' structures found on a *Plasmodium falciparum*-infected red cell (mean height: 19·65 nm; mean diameter: 96·64 nm) (bottom right). The 'knobs' on red cells containing mature asexual forms of *P. falciparum* assist the infected cells to bind/sequester to the vascular endothelium under shear flow conditions and thus avoid splenic clearance. The function of *P. malariae* spikes (which we have observed on every sexual and asexual stage examined in isolates from Indonesia and Thailand) is not known. The sample from which the *P. malariae* pictured was isolated (Mae Sod, Tak, Thailand) had the diagnosis confirmed by polymerase chain reaction. This picture is artificially coloured. The horizontal black scale bars represent 1 μm. The two lower images are identical in scale and orientation.

Ang Li[1]
Bruce Russell[1,2]
Laurent Renia[2]
Usa Lek-Uthai[3]
Francois Nosten[4,5,6]
Chwee T. Lim[1]

*[1]Nano Biomechanics Laboratory, Division of Bioengineering and Department of Mechanical Engineering, National University of Singapore, Singapore, [2]Singapore Immunology Network (SIgN), A*STAR, Biopolis, Singapore, [3]Department of Parasitology and Entomology, Faculty of Public Health, Mahidol University, Bangkok, Thailand, [4]Shoklo Malaria Research Unit, Mae Sod, Thailand, [5]Nuffield Department of Clinical Medicine, University of Oxford, CCVTM, Oxford, UK, and [6]Faculty of Tropical Medicine, Mahidol University, Rajvithi Road, Bangkok Thailand.*
E-mail: bruce_russell@immunol.a-star.edu.sg (malaria); ctlim@nus.edu.sg (imaging)

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